

# Building an Effective, Data-Driven, Violent Crime Fighting Program at the Local Level: Examples from Los Angeles and Chicago

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## **I. Step One: Recognizing the Crisis and Seeking Outside Input and Potential Solutions**

Recent isolated surges in gun violence in Chicago and other major American cities, have accelerated the need for an evidence-based approach to violent crime control. The ability of visionary police leaders to accept that they may not have all of the answers, and to ask for specialist support, has helped local police agencies evolve into learning organizations that truly embrace change. Police departments in Los Angeles, Chicago and Baltimore have embraced a knowledge transfer approach that has contributed significantly to reductions in the level of violence plaguing their cities.

This article will provide a brief overview of what has been successful in combatting violent crime in LA and in Chicago and offers some suggestions on how other jurisdictions, with support from their federal partners can stem the tide of violence that has enveloped cities throughout the country, with deadly consequences. It is offered in the spirit of collaboration between and among partner agencies.

In Chicago, a steady trend of year over year crime reduction and community policing came to an abrupt halt in 2016, when the city experienced a fifty-eight percent increase in murders, from 486 in 2015 to 768 victims in 2016.<sup>1</sup>

Half way through the year, city leaders recognized that they were dealing with epidemic levels of violence and began seeking out solutions. To their credit, Mayor Rahm Emanuel and newly appointed Superintendent, Eddie Johnson looked beyond Chicago for advice and counsel and best practices. Eddie Johnson commented that “we were in crisis and peoples’ lives depended on us getting a handle on the violence, so I called up colleagues from New York to LA to put our heads together and solve this thing.”<sup>2</sup>

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<sup>1</sup><https://urbanlabs.uchicago.edu/attachments/store/2435a5d4658e2ca19f4f225b810ce0dbdb9231cbdb8d702e784087469ee3/UChicagoCrimeLab+Gun+Violence+in+Chicago+2016.pdf>

<sup>2</sup> <https://www.nbcnews.com/nightly-news/video/chicago-police-use-new-strategy-to-fight-gun-violence-1229669955585?v=raillb>

Through the Bureau of Justice Assistance's Violence Reduction Network, Johnson was able to bring in experts from several departments and an assessment team was assembled. That team was originally comprised of the former Director of the Illinois State Police, Terry Gainer, Deputy Chief Sean Malinowski, Chief of Staff to LAPD Chief Charlie Beck, Craig Uchida, former Director of Research at NIJ and Marjolijn Bruggeling, a former lieutenant and recognized expert on predictive policing from the Netherlands.

The team conducted an assessment of CPD's crime fighting practices as well as their technology. The team was embraced by the department and through a collaborative research process, including incumbent interviews, focus groups and inspections, it was determined that while the Chicago Police Department had hard working officers and command staff and arguably the best technology available to a local police department, that technology was not being exploited to its full extent. In addition to expanding the use of the systems already in place and by incorporating gunshot detection and predictive technology, the team recommended incorporating a crime fighting process that combined elements from New York and Los Angeles. Working with Eddie Johnson's senior management team, under the leadership of Chief Jonathan Lewin, the group partnered with the University of Chicago Crime Lab and set about building data driven intelligence nerve centers in two of the most violence-plagued districts in the city, Englewood and Harrison. Johnson hand-picked two commanders for these districts, who happened to be twin brothers, Kenneth and Kevin Johnson (no relation).

Again, these enlightened leaders welcomed outside input and teamed up with the assessment team and Roseanna Ander and her team from the Crime Lab to hire and train personnel to staff the nerve centers, now called Strategic Decision Support Centers. The Bureau of Justice Assistance (BJA) and the Crime Lab facilitated the hiring of civilian data scientists and brought those analysts, along with senior Chicago police leaders, out to LA for an immersive training program in late 2016 and early 2017. During that visit, they met with LAPD Chief Charlie Beck and his team and were exposed to the ideal district and situation room concepts that had fueled the data driven crime fighting success LA has seen over recent years.

During that initial visit, Beck reminded the group that some ten years prior when he was a Captain in Rampart division, then Chief Bill Bratton sent Beck to Chicago for a similar immersive training program and knowledge transfer when LA was experiencing an uptick in violent crime.

## **II. Step Two: Finding the Right Fit**

### **A. The LAPD Crime Fighting Process**

Under the Smart Policing Initiative (SPI)<sup>3</sup> the LAPD has successfully implemented Los Angeles' Strategic Extraction and Restoration Program (LASER), first in Newton Division and now in fifteen additional patrol areas, with Justice & Security Strategies, Inc. (JSS) as the Research Partner.<sup>4</sup>

### **B. Operation LASER Concept**

SPI stresses a data-driven, evidence-based approach to crime control, with a particular emphasis on gun violence. In Los Angeles we first focused on reducing gun violence in Newton Division. Then-Captain Robert Lopez oversaw patrol operations and wanted to take a specific, laser-like approach to violence reduction. He indicated that he did not want officers or special units engaged in task force operations as they disrupted the communities and angered residents. Instead, he wanted a non-invasive and focused approach. Thus, LASER was born.

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<sup>3</sup> The program is now called Strategies for Policing Innovation (SPI) (*See* <http://www.strategiesforpolicinginnovation.com/>).

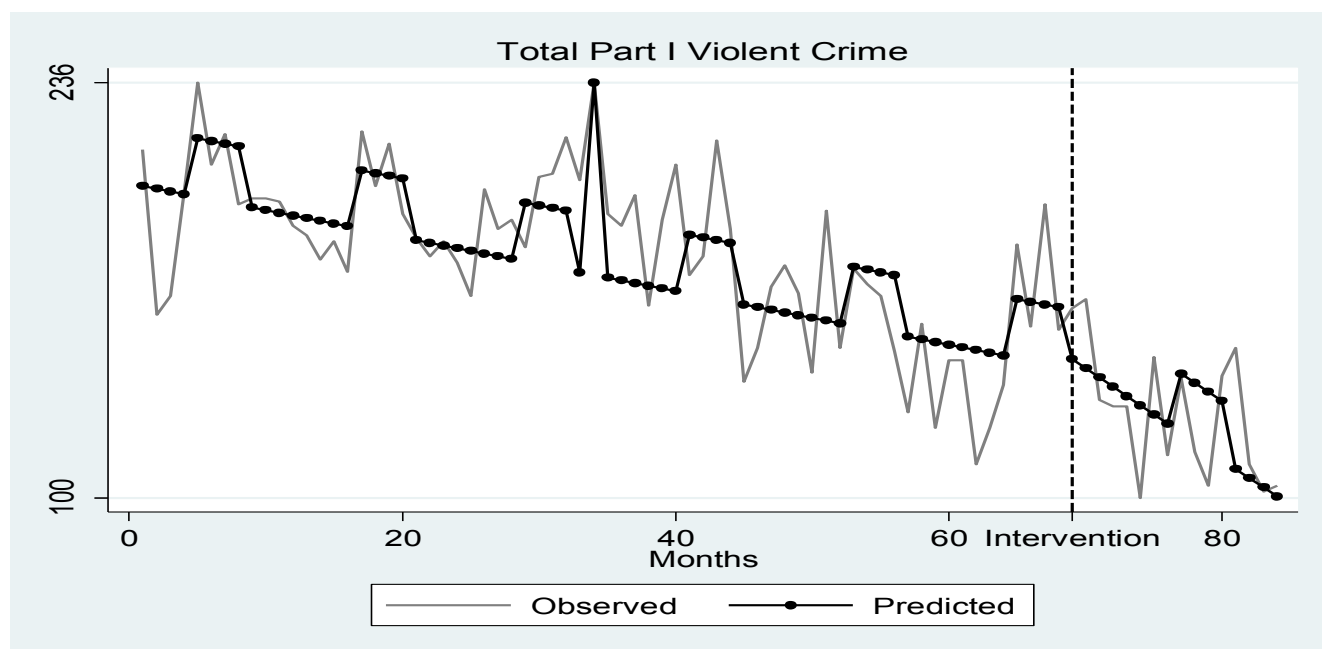
<sup>4</sup> The Research Partner was a requirement of the grant and JSS assisted in writing the grant with the LAPD.

LASER involves both location- and offender-based strategies using LAPD data from incident reports, field interview cards, arrests and other information. Using ArcGIS, analysts created LASER Zones—hot spot corridors where violence and gun-related crime persisted for at least ten years. Operation LASER also makes use of a Crime Intelligence Detail (CID), civilian and police analysts working side-by-side to determine crime patterns and identify chronic offenders. Analysts are trained to use Palantir and other software programs. Newton's CID developed proactive, real-time intelligence briefs called Chronic Offender Bulletins that identify active, violent offenders in specific neighborhoods.

Officers engaged in a variety of proactive missions in Newton. Foot and bike patrols were used extensively in the LASER Zones. Similarly, patrol and special units focused on chronic offenders.

### C. Operation LASER Evaluation Results

To evaluate LASER, Dr. Craig Uchida used two social science research methods—Interrupted Time-Series Analysis and Panel Analysis.<sup>5</sup> In particular, the research team analyzed monthly crime data for Newton Division and eighteen other divisions from January 2006 to June 2012. Results showed that Part I violent crimes, homicide, and robbery all decreased significantly in Newton after Operation LASER began. Part I violent crimes in Newton dropped by an average of 5.4 crimes per month, and homicides dropped by 22.6 percent per month. Importantly, the decline in crime did not occur in the other LAPD divisions (i.e., no displacement occurred), which provides strong evidence that Operation LASER was the reason behind the reduction in crime in Newton



Simply put, Operation LASER succeeded in reducing homicides in Newton by fifty-six percent compared to 2011 (thirty-six versus sixteen) and fifty-nine percent compared to 2010 (thirty-nine versus sixteen). Newton ended 2012 with an all-time low of sixteen homicides. In addition, overall violent crime

<sup>5</sup> See Craig D. Uchida et al, *Los Angeles, California Smart Policing Initiative: Reducing Gun-Related Violence Through Operation LASER*, SMART POLICING INITIATIVE: SITE SPOTLIGHT (2012); see also Craig D. Uchida & Marc Swatt, *Operation LASER and the Effectiveness of Hotspot Patrol: A Panel Analysis*, 16 POLICE QUARTERLY 287 (2013).

dropped nineteen percent in Newton (from 2011 to 2012) and Newton ranked number one in violent crime reduction in the entire LAPD for 2012.

These results resonated with Chicago as it was an example of how data and analytics, coupled with appropriate tactics and operations, could lead to crime reduction.

## **D. Conclusion**

BJA's Smart Policing Initiative/Strategies for Policing Innovation has been institutionalized within the LAPD. The use of data and analytics by civilians and cops occurs every day. LASER has been adopted in sixteen of twenty-one divisions, with the rest to follow by 2019. All four Patrol Bureaus will create operation centers to track and monitor their violent crime problems across divisions by the end of 2018.

## **III. Step Three: Customizing a Local Solution**

Most of the 768 homicides committed in Chicago in 2016 were committed using firearms in public places and were the result of an altercation of some variety, suggesting that the illegal possession of guns is a contributory factor for a great proportion of the city's violence problem. The victims murdered on the streets of Chicago are, disproportionately, residents of the city's most economically disadvantaged and racially segregated south and west side neighborhoods. Given this backdrop, Johnson and the CPD along with their newfound partners from LA and at the university, began to hone in on a Chicago violent crime reduction strategy.

### **A. The SDSCs: The Creation of Synergy Between the Process and Technology**

CPD, in partnership with Dr. Malinowski and the University of Chicago Crime Lab, started piloting and evaluating new approaches to gun violence prevention by helping police commanders effectively target their resources, and increase responsiveness to communities' needs. The key approach was to develop these district-based Strategic Decision Support Centers (SDSCs) to support district commanders in developing strategic crime plans whereby deployments would be tailored to the patterns observed in individual communities.

The CPD began constructing the Strategic Decision Support Centers in January 2017 and within a month (February) began operating in the Seventh and Eleventh Districts, the two most violent communities in the city. These districts had the greatest need for strategic gun violence initiatives and technical support, as in 2016 there were ninety-two more homicides in these two districts than in 2015, accounting for nearly a third of the city's total increase in murders in 2016.

SDSCs were established to act as a kind of bee hive of activity, a collaborative workplace for sharing intelligence for the district. These two hard hit districts truly embraced this new concept with flexible attitudes and made them their own. Each day, staff working the SDSCs, prepare a daily briefing for the district commander, collecting information from tactical teams, officers working beat cars, citywide specialized units, and federal partners. During the daily briefing, attendees have the opportunity to discuss crime in the districts (shootings, homicides, emerging trends or anomalies from analysis products), as well as the resources that are available to the district.

Reviewing crime data and intelligence each day and holding personnel accountable during district-level meetings represented a major shift in police practice at CPD; a shift we believe led to measurable reductions in shooting victims and homicides in these districts. By detecting patterns in the data and discussing them at these meetings, the SDSCs enable commanders to deploy officers more efficiently as the analyses focus on locations prone to violence and on repeat offenders. Based on the discussion during the daily briefing, the commander then allocates resources where they are believed to have the greatest impact on deterring crime.

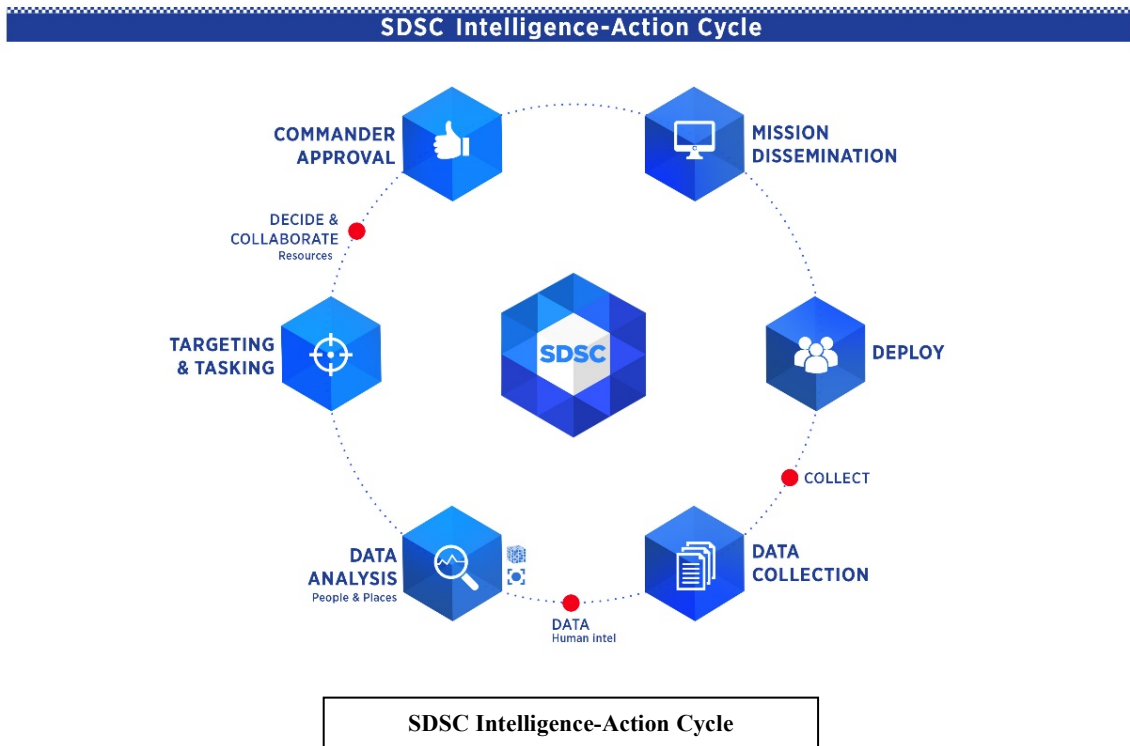
Reviewing crime data and intelligence each day and holding personnel accountable during district-level meetings represents a major shift in police practice at CPD, one we believe is leading to measurable reductions in shooting victims and homicides in these districts. Once the people and places most at risk are identified, SDSC personnel develop mission parameters based on the available resources. The expectation that commanders will create missions at the end of the meeting reinforces the importance of considerate decision making. These deployment decisions (missions) are communicated to beat officers and tactical teams during roll calls or via their mobile phones, and team leaders are tasked with reporting results back to the room for follow-up discussion in subsequent briefings, providing a 360-degree feedback loop. This constant analysis of what has been most and least effective in this cyclical, mission-based process allows for solutions to be evaluated and optimized. Each SDSC employs an analyst from the University of Chicago Crime Lab and their role is to provide valuable technological assistance for the use of the extensive suite of technology programs designed to enhance crime prevention efforts in the city.



**District 007 SDSC Personnel Meeting**

In essence, SDSC personnel use data analysis and technological tools to provide insight to facilitate effective decision making. The ultimate goal of the SDSC is to provide a process and an environment for collaboration and analysis, ultimately enabling better decisions to be made about missions, patrol, and tactical unit deployment.

The SDSC initiative marks the first time CPD districts have been equipped with the capacity and expertise needed to combine, synthesize, and distill relevant information from the department's diverse databases in an actionable and digestible format. The SDSCs also act as bases where specialized entities can participate in crime fighting strategies and harness the crime and response cycle, to ensure more effective policing.



Clearly, investments in cutting edge technology and intelligence tools are necessary within the SDSC to keep up with the evolving nature of violence in local neighborhoods. Some of these tools include SDSC Interactive Applications, Jaspersoft Reports, PAM, Surveillance Cameras, Gunshot Detection, Forecast Policing software such as HunchLab, Mobile devices and Social Media Monitoring, Vigilant and GunOps.

In some of the SDSCs, local State's Attorneys and/or other partners are assigned and work within the SDSC. Assigning Assistant State's Attorneys (ASAs) to the SDSCs has been very successful and proven useful in relationship building. The ASA attends the daily Commanders briefings and learns about the impact players who are driving violence in the neighborhood. For example, when one of the subjects gets arrested, officers know to call "their" States Attorney. The ASA will have built a packet on this subject's social media activity and the ASA will go to the bond hearing to make sure that this particular subject gets a higher bond or specific restrictions.

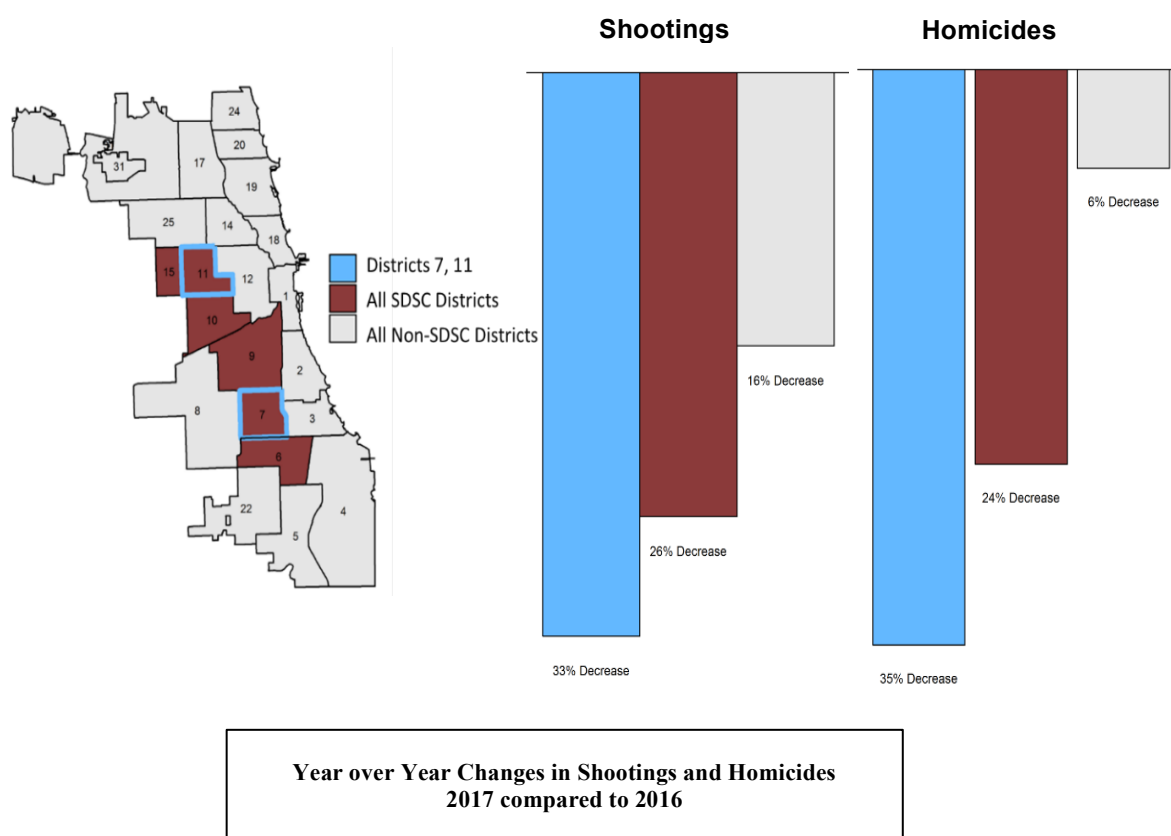
Instead of centralizing information at a main citywide location, the SDSCs move the intelligence gathering and analysis down to the local level. This makes the information more relevant, in real time and more tangible to the officers on the street. At the core of these strategies are missions, informed by real-time data analysis, that deploy resources where they will have the greatest impact, with the ultimate goal of giving officers the information they need to proactively fight and prevent crime.

Missions are by no means new to the department, but developing them at the district level, using a combination of intelligence from local officers and analytic support from civilian analysts from the University of Chicago Crime Lab, represents a major shift in police practice and ensures that missions are meaningful and measureable. Working in this way engages every employee in an effort to significantly reduce crime in the community.

## IV. Step Four: Evaluating Results and Institutionalizing the Concept

We saw significant reductions after opening the first two Strategic Decision Support Centers. There were even periods of a number of days in a row with no shootings at all, which is unprecedented and had not been seen for years. In 2017, Chicago experienced 764 fewer shooting incidents (negative twenty-two percent) relative to 2016. In District 007, historically one of the most violent districts in the city, these impressive gains are promising and not only when compared to 2016—the district experienced the second lowest level of shootings since CPD began storing this data electronically. These successes are critical to restoring public confidence in law enforcement. In March 2017, four new SDSCs were opened in districts 6, 9, 10 and 15. While the six SDSC-equipped districts represent just twenty percent of the city population, they account for almost fifty-five percent of Chicago’s shootings in 2016. CPD now operates thirteen SDSCs across the city.

The University of Chicago Crime Lab was tasked with conducting a formal and objective evaluation of the project. The SDSC evaluation relies on a synthetic control method to determine the significance of the project’s impact. A randomized control trial was not suitable because the evaluation began after implementation and also given the outlier nature of violence in the SDSC districts.

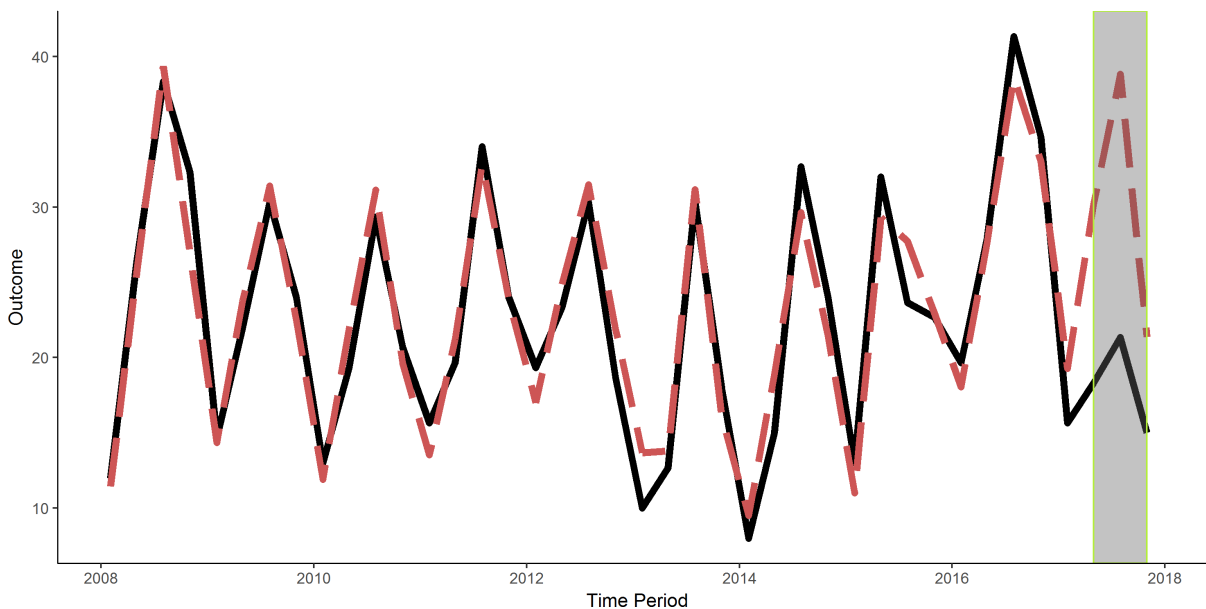


The synthetic control compares real crime or arrest data from an SDSC district to a synthetically constructed control group, which is made up of a weighted average of crime or arrests from non-SDSC districts.

The results presented are for District 007, which has received the fullest implementation of the SDSC project to date. The divergence between the synthetic control (red) and real (black) counts of

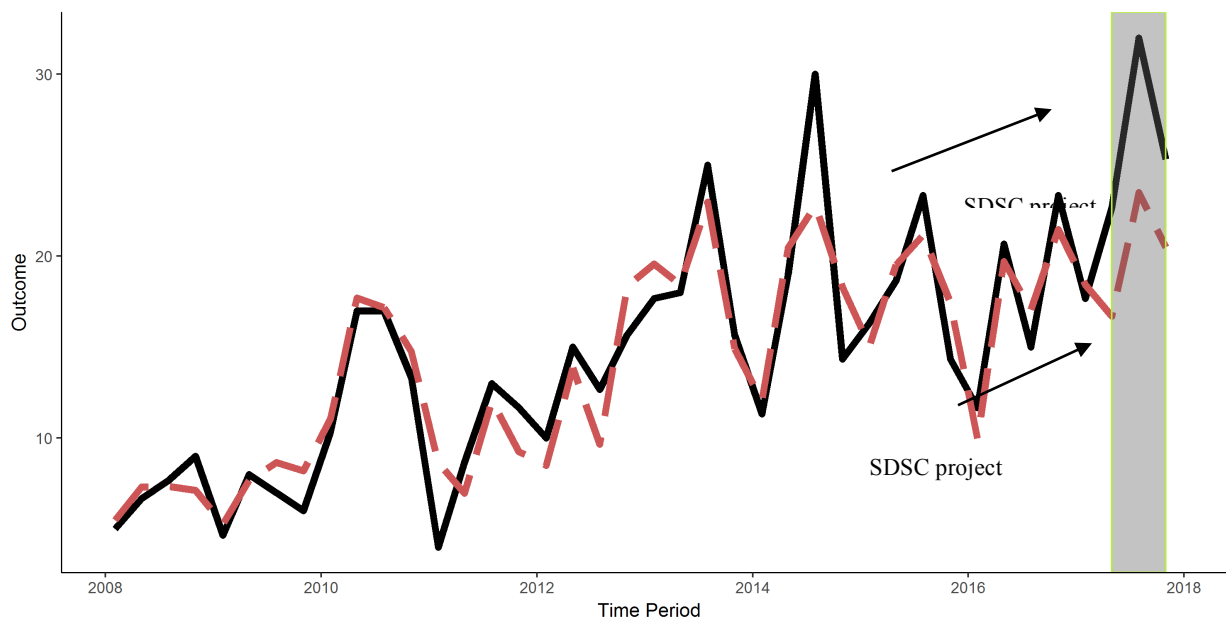


shootings in District 007 tell us that without the SDSC intervention, there would have been 107 *more* shooting incidents in 2017 than actually occurred.



Shootings in District 007

The 46.4% reduction in shootings associated with the beginning of the SDSC project in District 007 is an important metric, but not the only one. Arrest data shows that while police increased gun arrest activity in 2017, overall arrests continued to decline, indicating more targeted enforcement activity, and not an indiscriminate “flooding” of police activity in Englewood.



Gun Arrests in District 007



Another form of police activity that increased with the beginning of the SDSC project, and correlates with the reduction in gun violence, is Positive Community Interactions (PCI). The Crime Lab is currently performing analysis to determine what, if any, causal impact PCIs have on crime in District 007.

The SDSCs hold promise for leveraging the data, technology, and human intelligence available to CPD to make real progress on public safety and to promote police-community trust, as part of a larger strategy to strengthen and invest in communities hardest hit by violence.

## **V. How Can the U.S. Attorney's Office Help With this Process in Their Local Community?**

So, given the apparent promise of this type of decentralized targeted enforcement effort, how can local U.S. Attorney's Offices contribute to the success of their local police agencies in reducing violent crime?

First, the U.S. Attorney's office can act as a catalyst in broaching the subject with local police leaders as well as advocate for local police agencies to receive federal support in the form of subject matter expertise through BJA and other institutions. Next, by cultivating a collaborative working relationship between BJA and your local agency, subject matter experts can be identified and called upon to conduct assessments when required. Other important steps in helping at community level would include ensuring that prosecutors are embedded within the SDSCs and that analysts are available to support the locals with essential analysis.

It may also be helpful to work through a checklist of basic crime reduction elements with your partner agencies. These basic elements to get ahead of the violence, may include the following:

1. Conduct a thorough Needs Assessment;
2. Identify and Access Data Sources;
3. Build Political Will to support the crime fight;
4. Raise funds to extend the strategy;
5. Staff a Committed Team (CID) of civilian analysts and cops;
6. Build out a Collaborative Space for the SDSC;
7. Listen to street cops to Socialize Command Staff and Officers;
8. Bring in a research partner to assist with the evaluation;
9. Formalize the crime fighting process; and
10. Engage the community.

In closing, it is important to note that while LA and Chicago and now Baltimore have all seen success in implementing these data driven collaborative crime intelligence programs, each jurisdiction is different and faces unique challenges and any successful program would need to be customized to fit that jurisdiction's needs. Collaboration between local police agencies and their federal prosecutors in analysis, follow up and prosecution can yield significant progress against violent crime and improved outcomes in terms of community engagement.